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AUTHOR Hoffman, James V.
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ABSTRACT

This paper on the nature of instruction as it has been informed by instructional research is organized into two major sections. The background section describes the origin and evolution of the research that has been conducted into teacher response toward reading miscues, while the second section relates this research to other classroom research with the goal of participating in a working model for instruction. The major reading research studies can be categorized under three major headings: (1) investigations of teacher feedback as a decision making process tied to a teacher's conception or orientation to readings; (2) investigations exploring systematic differences in teacher feedback to miscue across different ability groups; and (3) investigations of qualitative relationships between teacher feedback and pupil miscue patterns. Academic work and social work perspectives toward this research are discussed. It is concluded that research must now move forward from the focus on what the teacher is doing, to research paradigms that are more considerate of and sensitive to the complexity of instruction. (CB)

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Research and Development Center for Teacher Education

The University of Texas at Austin

Austin, Texas 78712

INSTRUCTION: THE IMPLICATIONS OF RESEARCH ON TEACHER RESPONSE TOWARD READING MISCUES

James V. Hoffman

Report No. 9069

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INSTRUCTION: THE IMPLICATIONS OF RESEARCH
ON TEACHER RESPONSE TOWARD READING MISCUES

The title for this paper is somewhat ambiguous. One interpretation would lead the reader to expect to find a comprehensive review of research pointing toward or supporting a set of recommendations for effective instructional practice. This interpretation would result in a great disappointment to the reader. An alternative interpretation for the title would lead the reader to expect an essay on the nature of instruction as it has been informed by a particular line of research. It is this second interpretation that reflects the primary intent of the paper. That is, to present a reflective and highly personal view into how a particular research agenda has contributed to an understanding of the nature of instruction. The paper is grounded in the belief that instructional research will improve in quality only as our understanding of the nature of instruction itself is clarified and expanded. The paper is organized into two major sections: first, a background section that describes the origin and evolution of the research that we have conducted into teacher response toward reading miscues (Hoffman, O'Neal, Kastler, Segal, & Nash, 1984); and second, a speculative section that relates this research to other classroom research with the goal of participating in a working model for instruction.

Background

The 70s were exciting years in reading research. The "psycholinguistic" view of the reading process as formulated and described by Kenneth Goodman (1967, 1973) and Frank Smith (1971) captured the imagination of researchers and lifted the field from the doldrums of the First Grade Study mentality of methods comparisons.

The Goodman/Smith version of the psycholinguistic nature of the reading process assumes that a reader approaches text armed with knowledge of the

structural regularities of the language system and driven to construct a meaningful representation of the author's message. Specifically, the reader has knowledge of the syntactic, semantic and grapho-phonic cue systems of the language. The reading process is portrayed as active, anticipatory and self-regulating with the reader making use of the knowledge of cue systems to predict and confirm meaning as it is constructed. The significant breakthrough both conceptually and methodologically for this particular view came with the development of miscue analysis techniques. Goodman proposed that a qualitative analysis of children's oral reading errors is revealing of the psycholinguistic nature of the reading process. Miscues are analyzed for the degree to which they reflect attention to the three language cue systems. Numerous studies conducted during the early and mid-70s using this procedure offered support for this "psycholinguistic" view and demonstrated good/poor reader differences in cue utilization. Good readers, for example, were found to be more sensitive to the semantic constraints of language than poor readers. Studies showed good readers, in contrast to the poor, to be characterized by self-monitoring behaviors such as self-corrections when miscues violated semantic and syntactic constraints. Miscue analysis seemed to offer a "window" into the inner workings of reading as a psycholinguistic process. The child's developing model of what reading is and how it works was laid bare and open to inspection.

In 1977, Harste and Burke presented a conceptual paper at the National Reading Conference in which they argued that a child's reading development is at least in part a reflection of his/her instructional experiences in the classroom. Reading instruction is an enactment itself of a teacher's theoretical orientation to reading. A theoretical orientation refers to the set of underlying assumptions and beliefs a teacher holds regarding the

reading process and learning to read. Teachers who are code oriented tend to make code oriented instructional decisions and the actions that follow impact a child and move him or her toward code focused strategies and views of the reading process. Teachers who are meaning oriented tend to make meaning oriented instructional decisions and the actions that follow impact a child toward meaning oriented reading strategies and views of the reading process. Harste and Burke suggest that the strategies we observe children using through miscue analysis techniques are at least in part a mirror of their instructional history.

These views of reading as a psycholinguistic process and instruction as a reflection of theoretically driven teacher decision making that impacts student learning were the catalyst for our own research. Barr's (1974-75) classroom study of children learning to read in code versus meaning oriented programs offered some data to support this model but there was little research available mapping specific teacher behaviors in classroom reading instruction to the strategies its data were acquiring. Our focus settled on oral reading as an instructional event and specifically on the ways in which teachers responded to the miscues made by students during these instructional episodes.

In an instructional context each pupil error or miscue forms a decision point for the teacher in terms of selecting and communicating a response. One image for this instructional event is that of two models of the reading process clashing (or converging as the case may be); one, the child's developing model which is reflected in the characteristics of the miscue; and the other, the teacher's mature model which must somehow be reflected in the response strategies offered. If these interactions could be captured and described and their effects explored then our understanding of the

relationship between reading instruction and learning to read would be enhanced greatly.

The techniques for qualitative analysis of pupil errors were readily available through miscue analysis. Our efforts to develop a system to similarly capture the characteristics of teacher feedback consumed over two years work (Hoffman & Baker, 1981). The result was a framework we called the Feedback to Oral Reading Miscue Analysis System (FORMAS). This system is organized around five major clusters of teacher/pupil behaviors associated with an oral reading error (Figure 1). In cluster I the major characteristics of the miscue are coded to include the type of miscue, the degree of meaning change, and the grapho-phonic similarities between the miscue and the expected response. Cluster II relates to the student behavior that immediately follows the miscue (e.g., continued reading, immediate self-correction, call for help, etc.). The verbal feedback response strategies are covered in Cluster III. A major distinction is made here between no verbal response, terminal response (i.e., giving of the word or calling on another student) and sustaining response (i.e., attempts to have the student identify the word). Both terminal and sustaining responses are coded on wait-time dimensions. Sustaining feedback is further analyzed for whether it is simply attending or involves a prompt focused on either grapho-phonic or syntactic/semantic features. Cluster IV specifies the activity of the other members of the group in this interaction and Cluster V is used to record the final resolution of the miscue.

We have conducted numerous studies over the past five years investigating teacher feedback and pupil miscues. While the purpose of this

CLUSTER

I. Miscue (The observed response in relation to the expected response)

A. Type: Insertions, omissions, hesitations, substitutions, mispronunciations, calls for help, repetitions

B. Meaning Change: Little and substantial

C. Grapho-Phonic Similarity: High and low

II. Reaction (student's first behavior following the miscue)

A. Type: Repeated attempt, continuation, immediate self-correction, pause, call for help, no opportunity

III. Teacher Verbal Feedback (first teacher behavior in response to a miscue)

A. Type: No verbal, terminal (giving a text work or called on another student) and sustaining (providing opportunity or helping the student to identify the text word)

B. Form of Sustaining: Attending (non-cue focusing), grapho-phonic and contextual

C. Timing of Teacher Feedback: Immediate (less that 3 secs.) and delayed (more than 3 secs.)

D. Point of Feedback: Before the next sentence break, at the next sentence break, or following the next sentence break

IV. Other Student Verbal Feedback

A. Type: None, solicited and unsolicited

B. Timing: Immediate (less than 3 secs.) and delayed (more than 3 secs.)

C. Form: Attending (non-cue focusing), grapho-phonic and contextual

V. Resolution

A. Type: Teacher identified text word, student identified text word, another student identified text word, or miscue left unidentified

Figure 1. A breakdown of the FORMAS variables

paper is not to review the general characteristics or specific findings from these studies it will be useful to give an overview of the kinds of studies conducted in particular as they relate to a developing conception of instruction.

The major studies can be organized under three major headings: (1) investigations of teacher feedback as a decision making process tied to a teacher's conception or orientation to reading (Hoffman & Kugle, 1983); (2) investigations exploring systematic differences in teacher feedback to miscues across different ability groups (Hoffman & Clements, 1983); and (3) investigations of qualitative relationships between teacher feedback and pupil miscue patterns (Hoffman, O'Neal, Kastler, Segal, & Nash, 1984).

In the area of teachers' theoretical orientation toward reading and its relationship to response strategies, we collected samples of group oral reading instruction in classrooms. Some groups were videotaped; others were audiotaped. The interaction patterns over miscues were analyzed with FORMAS. The teachers' "orientations" to reading were assessed using Deford's Theoretical Orientation to Reading Profile (TORP) and Duffy's Propositions About Reading Inventory (PRI). A subsample of these teachers participated in a stimulated recall interview process where they listened to or watched their interactions and commented on their own behaviors. Our analyses of these data revealed little if any relationship between the teachers' "orientation" toward reading and feedback patterns that would be consistent with the orientation. In our quantitative analysis, for example, we found no significant correlation between the proportion of "no response" to low meaning change miscues and the degree of "whole language" orientation on the part of the teacher. Under stimulated recall conditions, the teachers tended to explain their choice of response strategies in terms of

management concerns and occasionally in terms of pupil needs and capabilities. Seldom did we encounter direct references to belief systems about reading and learning to read as explanations for the strategies used. Teachers did not have strong beliefs about reading and reading instruction, but in the case of verbal feedback their behavior appeared to be more often determined by immediate contextual factors.

The data comparing teacher responses to low and high ability readers were drawn from two different sets of teachers working with basal reading groups. One set of reading groups was videotaped and the other audiotaped. In all cases we had multiple samples of reading group interactions across the school year and for the most part, we observed each teacher working with both high and low ability groups of readers. Comparing just the verbal response patterns to miscues, we found enormous differences in the patterns across the two ability levels. For example, terminal feedback was far and away the most common type of feedback offered by teachers working in low ability group settings; while "no response" was the most common type of feedback offered by teachers working in high ability settings. Teachers were much more likely to delay responses to miscues when working with high groups than with low groups. We found the differences in response patterns striking across the two groups on almost all accounts. However, when we compared the qualitative characteristics of the miscues and pupil reaction patterns of the two ability groups and aligned these with the teacher responses, we found tremendous consistency in the teacher response patterns across the two ability levels. The miscue patterns we observed in actual reading groups replicated and extended earlier clinical studies. For example, good readers did not change meaning as often as the poor readers. Good readers tended to engage in immediate and delayed self-correction more

often than the poor. The teachers were, in this light, consistent in relating responses to miscue patterns.

Our qualitative analysis of relationships between miscue patterns and response patterns involved an extended and in depth look at the same data set. Here for example we discovered the strong relationship between such areas as: hesitations on the part of the reader and terminal feedback; low meaning change miscues and "no response" from the teacher; continuations following a miscue and increased wait time.

Our qualitative analysis also revealed the strong influence of "error rate" on pupil miscue and reaction patterns. The frequency of errors for the readers in the low groups was far greater than the error rate for readers in the high groups. In one data set the error rate for low group readers was 11% while for the high group readers the error rate was 5%. In another data set the error rate for the low group readers was 9% while for the higher it was 5%. The task demands were by virture of text difficulty alone significantly different for the low and high group readers.

As we explored the response patterns across the two ability groups we came to a number of conclusions: (1) the patterns of miscues and responses for each group were "compatible" in the sense that they reinforced each other; (2) these mutually reinforcing patterns seem to insure that the good readers would continue to exhibit the reading strategies associated with good readers and that the poor readers would continue to exhibit the reading strategies associated with poor readers; (3) the patterns of teacher response maximized content coverage while maintaining reasonable activity flow for both groups.

-The uncomfortable explanation we came up with for the interaction patterns we observed is that teachers are behaving (in terms of their

responses to pupil miscues) in a quite rationale manner given the task conditions. Teachers simply could not be expected to use the same feedback strategies (e.g., extended wait-time) with the low group as with the high group. Activity flow would be disrupted and a management nightmare created. Our research led us to conclude that the context for instruction and the characteristics of the academic tasks force teachers to choose instructional solutions that are usually quite valid in the sense that they solve the teachers most pressing concerns for activity flow and content coverage. For the teacher to break the syndrome of failure for poor readers is no easy task when one considers that simplistic solutions (e.g., treat the low group like the high group) will not work due to the fact that they often threaten the orderly nature of the work system in the classroom.

Instructional Research

In this section of the paper we will attempt to place the research we described into the broader context of research on teaching as it has developed over the past two decades. In doing so, we will then be in a better position to generalize a concept beyond "oral reading miscues and teacher response."

Schwab's (1960) four commonplaces of schools...the teacher, the student, the content and the milieu...provide a useful framework for describing the shifts that have taken place in research in teaching over the years (Figure 2). Early research on schooling and its effects on pupil learning tended to focus and stay isolated within one or another of the four commonplaces. Thus, there was research focusing on characteristics of the student (e.g., intelligence) and this factor was related to learning in schools. Other research focused on the influence of the milieu in terms of

such factors as social and economic background as it related to pupil learning. Many characteristics of the teacher were studied (e.g., personality) for their effects on pupil learning. Finally, the content area was investigated with methods comparison such as the USOE sponsored First Grade Studies in the area of reading.

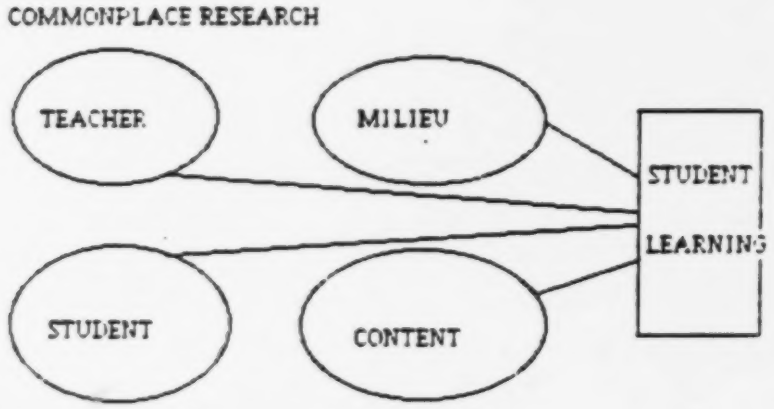

Figure 2. Commonplace Research on Teaching

This commonplace phase of research on schooling and its effects was interesting on a number of accounts. First, there was little crossing of commonplace boundaries in the studies conducted. Thus, studies of pupil characteristics ignored or attempted to randomize the effects of method in accounting for pupil learning. Methods comparisons ignored or attempted to randomize the effects of the teacher on learning. Second, research communities developed around these commonplaces to the point that professional organizations and departmental structures in colleges and universities came to reflect interest in their respective areas. Third, and not unrelated to the second, different paradigms for conducting research emerged around the different areas with one paradigm often achieving a dominant status. The dominant paradigm carried with it certain assumptions

about schooling and made legitimate certain kinds of questions that could be addressed through research. Fourth, and finally, the findings from commonplace research were uniformly disappointing to educators. In the areas of the teacher and the content we found that nothing seems to make a difference in student learning. In the areas of the student and the milieu we found that those things that do make a difference are outside the control of educators.

The breakthrough in research in teaching came when researchers began to actually look in classrooms and describe what teachers were doing with students (Figure 3). When these classroom behaviors were related to pupil growth significant relationships were discovered. The process-product paradigm was perfected and teacher effectiveness research was spawned. The direct instruction model emerged through the late 60s and early 70s.

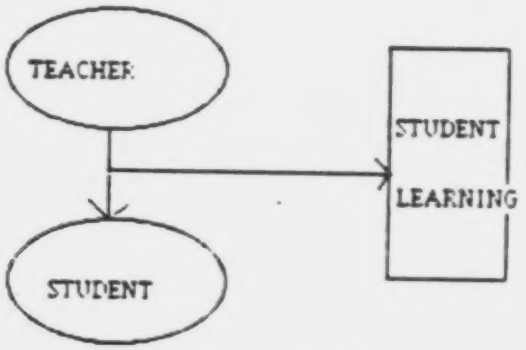

Figure 3. Process-Product Research in Teaching

Toward the middle of the decade classroom researchers began to distinguish between teacher behaviors directed toward students that were focused on academics and teacher behaviors directed toward organizing and managing the classroom environment (Figure 4). The ways in which teachers

interacted with and directly manipulated the context (or Schwab's milieu) were found to significantly relate to pupil growth. The academic functions and managerial functions of teaching were subsequently codified in terms of effective behaviors through the early 80s (Rosenshine, 1983).

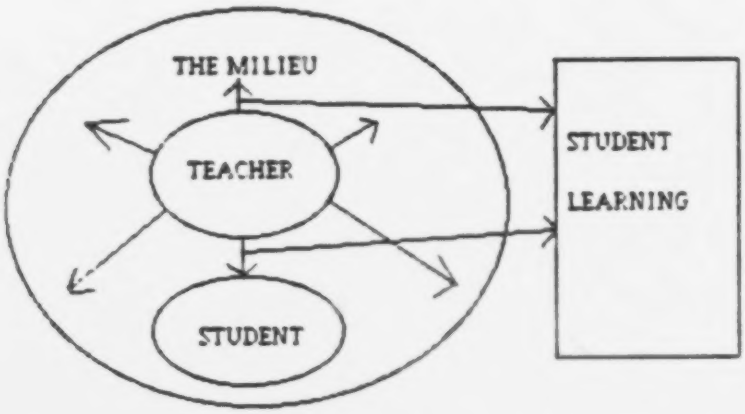

Figure 4. Process-Product Research into the Academic and Managerial Functions of Teaching

This line of research has had a tremendous impact in education, though it has not gone on unchallenged. Attacks have focused on the grounds that it has failed: to consider the ways in which the environment is shaping the behavior of teacher and student (an ecological view); to describe the content of what is being taught and the task structure in which the content is embedded; to explain the ways in which teacher behaviors are mediating student processing; and to account for teachers efforts to manipulate the learning task rather than instruct the students.

Our research into miscues and teacher responses operated in many ways from a process-product framework with a focus on teacher behaviors but it was different on a number of counts: first, in its ties to a theory of reader text interaction; second, in its emphasis on how the students were incorporating teacher response behaviors into their own strategies; and,

third, in its focus on reading instruction in a very specific task structure.

Academic Work

Doyle (1984) has proposed "academic work" as a framework for understanding teaching that I believe is more consistert with the reality of classroom life and more considerate of both the student and teacher as sense makers of classroom events than is represented in typical process-product research. "Academic work" also allows me to incorporate Schwab's fourth commonplace: the content...into the picture (Figure 5). It would be inaccurate to suggest that early research in teaching had ignored the "content" altogether. Studies that included a focus on "time on task" and "success rates" certainly involved some degree of consideration of the content. Still, it is often difficult to reconstruct from process-product research reports what students were doing or expected to do, let alone infer anything about the cognitive demands of the tasks students were engaged in.

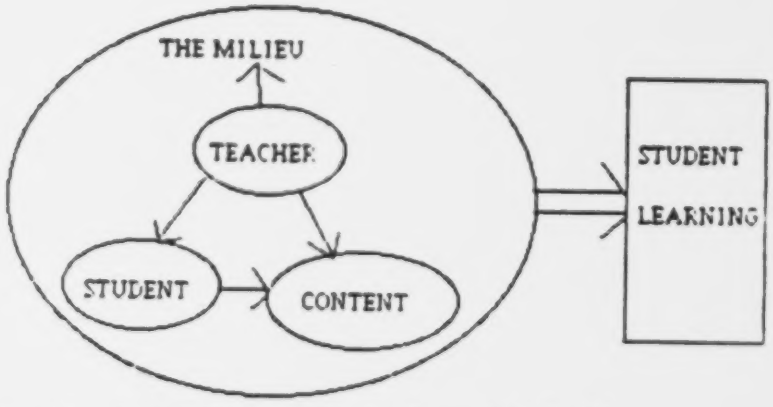

Figure 5. An Academic Framework for Research in Teaching

Doyle suggests that a different way of looking at what's going on in classrooms is to assume the student's perspective. Concentrating for the moment on the purely academic side of classroom life, from the student's

viewpoint the day in school is filled with work to be completed. This academic work places varying cognitive demands on the learner. The teacher's role is one of planning work; organizing and managing the workspace; initiating and sustaining students' interaction with the work; adjusting the "work" when need be; and, finally, holding students accountable for work completion. A researcher's role is to describe this complex set of operations and uncover the underlying relationships that exist between the various teacher activities, pupil behaviors, and related learning.

Adopting this perspective suggests insights into our research both in terms of its strengths and weaknesses and its underlying assumptions about instruction. Oral reading in the reading group is one kind of "academic work" that teachers engage students in. In our research we were able to describe the teachers' response behavior in relation to the strategies students were using in their oral reading. One example of this can be seen in the use of the terminal response strategy. A terminal response by the teacher involves not only feedback but also the direct manipulation of the task itself. At the point of a miscue the teacher faces an option of instructing or changing the task itself. In creating a simple memory task with a terminal response, the risk to task completion is reduced and content coverage insured. In working with low ability readers in a high risk task environment, it is no wonder that teachers so often resort to this strategy. Doyle has discovered a similar kind of a phenomenon in studies of academic tasks in secondary English classrooms. Teachers often reduce the complexity of the task during teaching with the effect of insuring success and reducing the risk to the work system. This kind of strategy is often lost in typical process-product research where the focus is solely on teacher behaviors

directed toward students. Simplistic applications of process-product research to imporve student learning such as increasing student time on task are often achieved, I suspect, by reducing the complexity of academic work, not by offering more or better teaching.

Social Work

While I find considerable merit in the "academic work" perspective for looking in classrooms, it is nonetheless incomplete in its accounting for teaching and learning. In particular, I believe that it underplays the importance of the social system in which this work is accomplished. Academic work in the classroom is always embedded in a social context. The two are not independent but interdependent particularly when the cognitive demands on the learner are high. If one adopts a Vygotskyian (1962, 1978) framework for understanding learning then social interaction is not just facilitating but a necessary partner to an academic task if higher levels of cognitive activity are to occur. Meaning is constructed first socially and then internalized into a functioning cognitive system. The more teachers include and deal with higher order learning tasks and push the frontiers of a student's zone of proximal development, the more necessary it is to construct social work systems that support learning.

The current conception of an ideal work system in a classroom, if one reviews the process-product literature on classroom organization and management, is rather unidimensional. Drawing out of classroom studies of students learning basic skills we find evidence to support the benefits of structured, autocratic, teacher dominated work systems. While this kind of work system may be appropriate in some situations, it may be counterproductive when the cognitive demands of a learning task are high. To not include higher order learning tasks or reduce them to lower order

tasks during instruction because an autocratic work system will not support the learning seems to be a case of the tail wagging the dog. Instruction must include a consideration of social work systems. Slavin's (1984) work on cooperative learning comes to mind as an example of instructional research that includes and builds on this perspective, as does the work of Au (1983) and her associates with the KEEP project in their studies of reading group interaction patterns that facilitate comprehension.

The task structure for the oral reading instruction we observed was unidimensional. Round-robin reading was the only format for oral reading instruction we observed. Our interviews with teachers revealed that they felt round-robin reading was valuable for their students. The teachers were not aware of any viable alternatives to this structure for oral reading. Round-robin reading is tied to a teacher dominated social control system that "works" for teachers in the sense of covering the content and maintaining an orderly environment. As one moves to consider oral reading instruction as it might relate to or build on comprehension through expressive or interpretive reading, though, the round-robin system fails.

Implications for Instruction and Instructional Research: The Future

Instruction is a complex endeavor both for those who attempt to do it well with children in classrooms and those who seek to uncover its intricacies through research. The "doing" of instruction, to me, is captured best by analogy to the solving of a simultaneous equations in mathematics. The teacher must address/solve the "classroom order" equation in terms of minimal if not high levels of cooperation by students. The teacher must address/solve the "content coverage" equation in terms of students completing the "work" that is mandated through the curriculum and enacted by them in academic tasks. The teacher must address/solve the

"learning" equation most visibly in terms of maximizing student performance on test scores through "assisting" students directly and indirectly in completing work well. Each of the equations has certain constraints that are fixed with the context (e.g., class size, physical space, etc.) as well as variables that are open to manipulation (e.g., the amount of individualized attention, direct instruction, arranging and revising academic tasks, independent/cooperative work arrangements). Each of the equations can be solved independently in a variety of ways with "learning" at least theoretically being the most important. In reality though, the "classroom order" and "content coverage" often take precedence in the teacher's mind. The learning/instruction equation is addressed only after the others are solved and once these are solved there is little room for the learning equation to vary much in the amount and kind of assignment offered. While this analogy leads to a rather deterministic view of classroom teaching, it does suggest that instruction cannot be addressed by teachers or researcher independent of milieu and content issues.

This perspective on instruction which binds together the teacher, the task, the student and the milieu suggests how past research on reading instruction is of limited value. Process-product research has served the useful function on propelling us into the classroom and into contact with the phenomena of instruction. It is time, however, to move forward from our focus and preoccupation on what the teacher is doing to adopt research paradigms that are more considerate of and sensitive to the complexity of instruction. We need research that goes beyond a description of what teachers do to research that sheds light on why they do what they do. The "academic work" or task perspective is one such paradigm.

In our own research we have adopted a component building paradigm for instructional research (Hoffman, 1984; Slavin, 1984) that involves a series of small experimental studies designed to refine and perfect strategies for effective use of oral reading. Our efforts are now focused on research and development what we call a "recitation lesson" format. We have observed, interestingly, that by manipulating the task structure we have had the effect of changing the ways in which teachers respond to miscues without changing text difficulty or calling specific attention to response strategies.

There are no quick and easy roads to doing instructional research. No single experiment will provide the answer to any significant questions in the teaching of reading. Progress will come when we construct research agendas that are long term and focused. Progress will come when we live in classrooms with teachers exploring the complexity of reading instruction and unlocking its mysteries.

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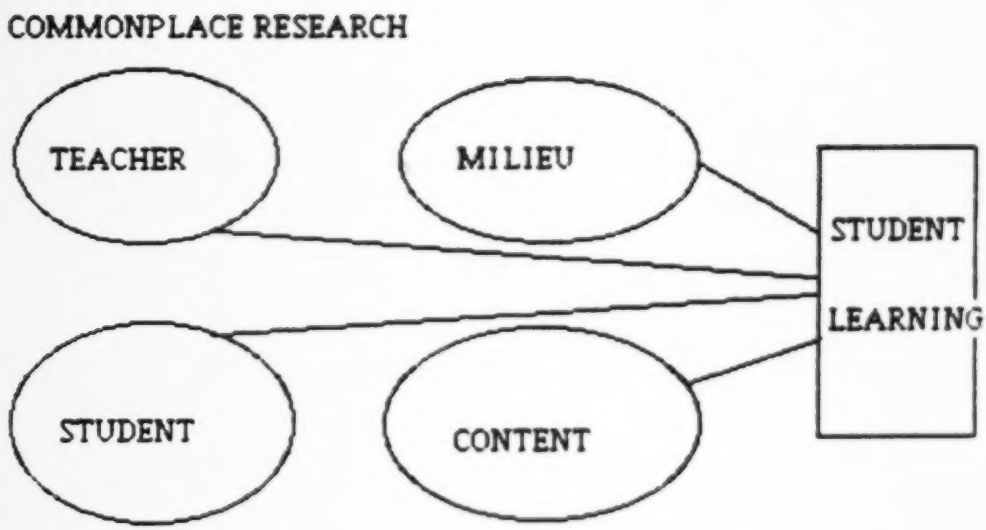
COMMONPLACE RESEARCH
TEACHER
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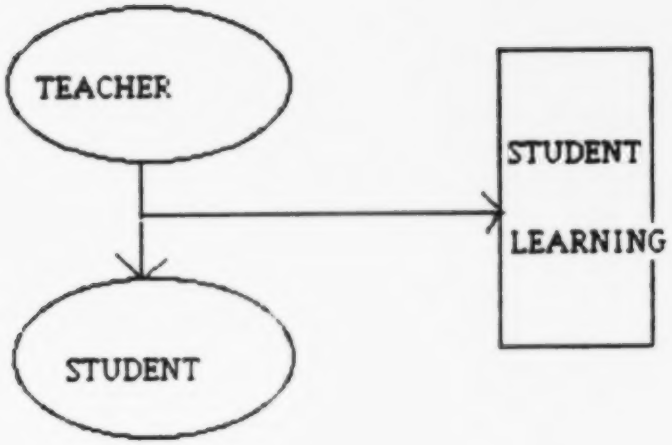
Figure 2.



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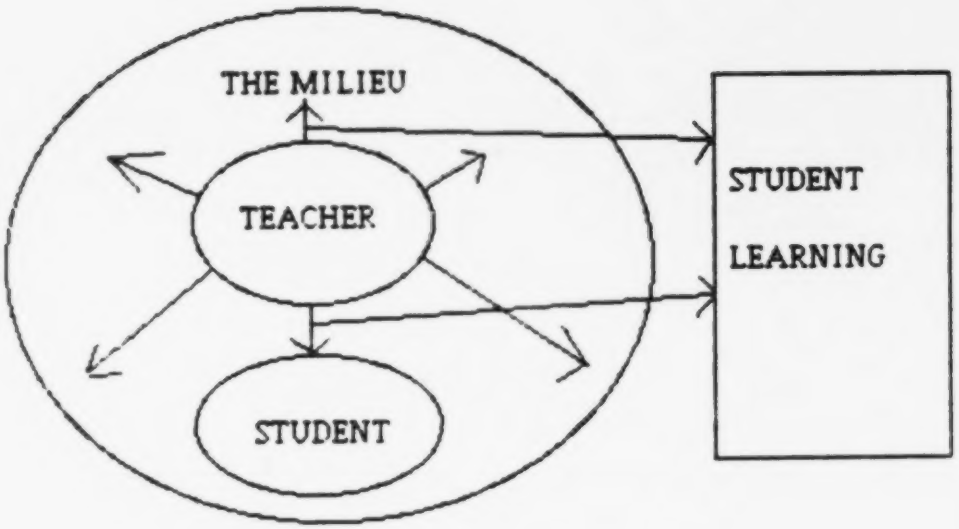

Figure 4.

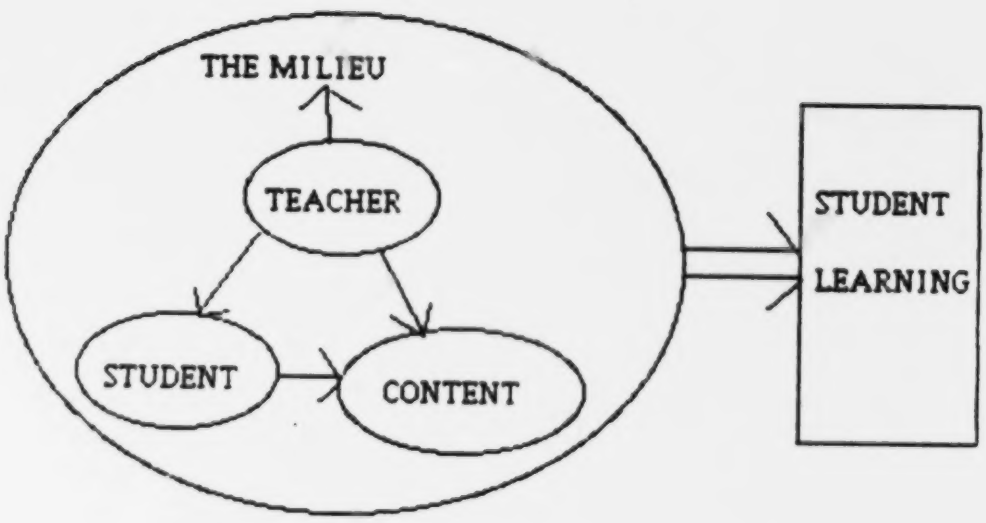

Figure 5.